



Where I work Lindonne Telesford

Photographed for *Nature*
by Micah B. Rubin.

"As a public-health researcher based in Grenada, I'm looking at some of the climate-change issues that plague this small island state and the wider Caribbean region. Agriculture is facing a significant impact from climate change here, especially from droughts on the northern, drier side of the island, and it needs to adapt and respond.

In this photo, I'm measuring green-bean plants in an experiment that my team and I ran at the request of Grenada's government. The idea was to test an innovative farming product that could help to counter those droughts. Called Porous Alpha, this 'foamed glass' product was developed by researchers at Tottori University in Japan, together with a private research organization, Tottori Resource Recycling.

Porous Alpha is made by grinding up waste glass, mixing the result with calcium carbonate and a proprietary ingredient, then heating it to 750 °C to produce many tiny, continuous pores. The resulting powder can be added to soil, where the

pores trap water – along with the nutrients dissolved in the water – and retain it for much longer than untreated soil can. Because it's made from glass, it's stable in the soil for a long time and is environmentally friendly. We've shown, albeit only in a pilot study, that plants grown in soil treated with porous glass consistently had a higher yield than control plants did.

Such a product would help farmers to adapt to climate change by using less water. Members of the Best Practices Farmers Movement, an advocacy group here, say they're excited about the potential of using this technology to conserve water. Agricultural research is a major undertaking for Grenada, because the country has a low research capacity – but every little bit counts if it can bring benefits to farmers and protect our island environment."

Lindonne Telesford is a public-health researcher, associate lecturer and assistant dean at St. George's University in Grenada.

Interview by Kendall Powell. This interview has been edited for length and clarity.